

USEPA REGION 9 LABORATORY
REPORT NARRATIVE

CASE NUMBER: R99S48
SAMPLE DELIVERY GROUP: 99271C
PROGRAM: SUPERFUND
DOCUMENT CONTROL #: ESTW-9B-2619
DATE: 10/19/99
ANALYSIS: PERCHLORATE AND TOTAL DISSOLVED SOLIDS

SAMPLE NUMBERS:

<u>SAMPLE ID</u>	<u>LABORATORY SAMPLE ID</u>
CR abv Imp. Dam (12/16/98)	AB24284
CR abv Imp. Dam (03/24/99)	AB24285
CR abv Imp. Dam (04/28/99)	AB24286
CR abv Imp. Dam (05/26/99)	AB24287
CR abv Imp. Dam (08/25/99)	AB24288
CR @ NIB (12/17/98)	AB24289
CR @ NIB (03/25/99)	AB24290
CR @ NIB (04/27/99)	AB24291
CR @ NIB (05/25/99)	AB24292
CR @ NIB (07/01/99)	AB24293
CR @ NIB (08/24/99)	AB24294

GENERAL COMMENTS

Eleven water samples were received from the Colorado River Perchlorate Study Superfund project on 09/28/99.

The requested analyses were perchlorate (Region 9 Lab SOP 531) and total dissolved solids (EPA Method 160.1).

SAMPLE RECEIPT AND PRESERVATION

No custody seals were present.

QA/QC SUMMARY

Laboratory Reagent Blanks (LRB)

A laboratory reagent blank is laboratory reagent water or baked sand with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory reagent blank is used to determine the level of contamination introduced by the laboratory during analysis.

No analytes were detected in the blanks associated with this SDG.

Laboratory Fortified Matrix Spike (LFM) and Laboratory Duplicate Analysis (QC Samples: AB24288 and AB24294)

The laboratory fortified matrix spike sample and laboratory duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and

large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

All perchlorate LFM recoveries were within the QC limits. The perchlorate result for AB24294 was less than the QL and no RPD was calculated. All other RPDs were less than or equal to the 20% QC limit.

Laboratory Fortified Blank (LFB) Analysis

The laboratory fortified blank is laboratory reagent water or baked sand with a known concentration of the analytes of interest added by the laboratory with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. Poor percent recovery (%R) results may indicate inconsistent laboratory technique.

All LFB recoveries were within the QC limits.

Questions concerning the data can be answered by Patrick Hirata at (510) 412-2354.

**USEPA REGION 9 LABORATORY
QUALIFIER DEFINITIONS FOR INORGANIC SAMPLE RESULTS**

- U** The analyte was analyzed for, but was not detected above one half the Quantitation Limit (QL). The reported value is the QL for all analytes.
- J** The reported value is an estimated quantity.
- N** LFM sample recovery not within control limits. The reported value is estimated because the LFM recovery result did not meet the 75-125% criteria for accuracy. The result is considered quantitatively uncertain. The LFM analysis provides information about the effect of the sample matrix on the digestion and measurement methodology.
- *** Duplicate analysis not within control limits. Duplicated analyses demonstrate the analytical precision obtained for each sample matrix. The result is estimated and considered quantitatively uncertain. The imprecision between duplicate results may be due to sample non-homogeneity for soil sample, high levels of solids in the sample for water samples, inconsistent laboratory technique, or method defects.

EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R99S48
Site: Colorado River Perchlorate Study
SDG: 99271C
Date: 10/19/99

Analysis: Perchlorate and Total Dissolved Solids
Matrix: Water

Sample No.	429490		429490		429490		429490		429490		522000		522000	
Sample I.D.	CR abv Imp. Dam		CR abv Imp. Dam		CR abv Imp. Dam		CR abv Imp. Dam		CR abv Imp. Dam		CR @ NIB		CR @ NIB	
Lab Sample I.D.	AB24284		AB24285		AB24286		AB24287		AB24288		AB24289		AB24290	
Date of Collection	12/16/98		03/24/99		04/28/99		05/26/99		08/25/99		12/17/98		03/25/99	
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Perchlorate (units of ug/L)	3	J	5		5		4	J	4	J	3	J	5	
Total Dissolved Solids (units of mg/L)	770		690		760		800		770		680		830	

Q - Laboratory Data Qualifiers; Refer to EPA Region 9 Laboratory Qualifier Definitions

Sample No.	522000		522000		522000		522000		N/A		Quantitation
Sample I.D.	CR @ NIB		CR @ NIB		CR @ NIB		CR @ NIB		Reagent Blank		Limit
Lab Sample I.D.	AB24291		AB24292		AB24293		AB24294		N/A		N/A
Date of Collection	04/27/99		05/25/99		07/01/99		08/24/99		N/A		N/A
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result
Perchlorate (units of ug/L)	4	J	3	J	3	J	5	U	5	U	5
Total Dissolved Solids (units of mg/L)	870		820		850		940		20		20

Q - Laboratory Data Qualifiers; Refer to EPA Region 9 Laboratory Qualifier Definitions